EXPLORATION UPDATE SPECTRUM PROJECT, NORTHERN TERRITORY

Ramp-up to Spectrum's maiden drilling underway as major new granite body is identified, increasing multi-commodity potential

HIGHLIGHTS

- Advanced drill planning underway to test Spectrum's numerous REE-Au-Cu targets along the Fenton Shear Zone.
- Spectrum is fully permitted for a 20-hole Reverse Circulation (RC) and Diamond Drill (DD) program, with drilling to commence as soon as the dry season commences.
- The Company is currently in the final stages of a drill tender and has commenced logistics planning for the upcoming drill program.
- New gravity data coverage has identified a large, previously unrecognised, buried granite, named here the Oolloo Granite, immediately west of the Spectrum Project (see Figure 1).
- Oolloo Granite located along the western margin of the Fenton Shear Zone adds to the multicommodity potential of the Project through the likely addition of high heat flow and fluid input to the mineralised system.
- New granite appears to be a newly recognised member of the Cullen Granite Supersuite, which is known to be associated with gold, copper, tin, tungsten and uranium mineralisation in the Pine Creek region[1]. Drilling by DeSoto at Fenton in 2023 intersected granite at depth confirming the gravity interpretation.
- 3D modelling of the basement/cover unconformity surface (from Airborne Electro-Magnetic and drilling data) reveals a NNW-SSE trending "cliff-like" edge in the subsurface at Quantum. This represents a 40m step in the Cambrian cover unconformity, with thinner cover to the east (less than 100m). The step is interpreted as due to fault re-activation of the Fenton Shear Zone.
- A newly identified REE-Cu-Au drill target – Quantum North on EL33615 (see Figure 2) is in the process of being drill permitted with drilling likely in the second half of the dry season. Quantum North can be drill tested by RC drilling.
- Homestake explored the region in the 1990's based on their recognition of strong geological similarities with the rocks hosting the South Dakota Lead Style 40Moz Au deposit.

[1]Source: Wyborn, L., Jagodzinski E., Bastrakova, I. and Budd, A., 2001: Pine Creek Inlier Synthesis. GeoScience Australia (see https://www.ga.gov.au/bigobj/GA3790.pdf)

- This new interpretation of a likely Cullen Suite granite adjacent to the Fenton structure within the Spectrum Project enhances the project's potential for multi-metal mineralisation[2] combining Lead-style gold mineralization with possible granite-related REE-Cu mineralization both formed at the intersection between the Fenton Shear Zone and the Hayes Creek Fault (Figure 1).

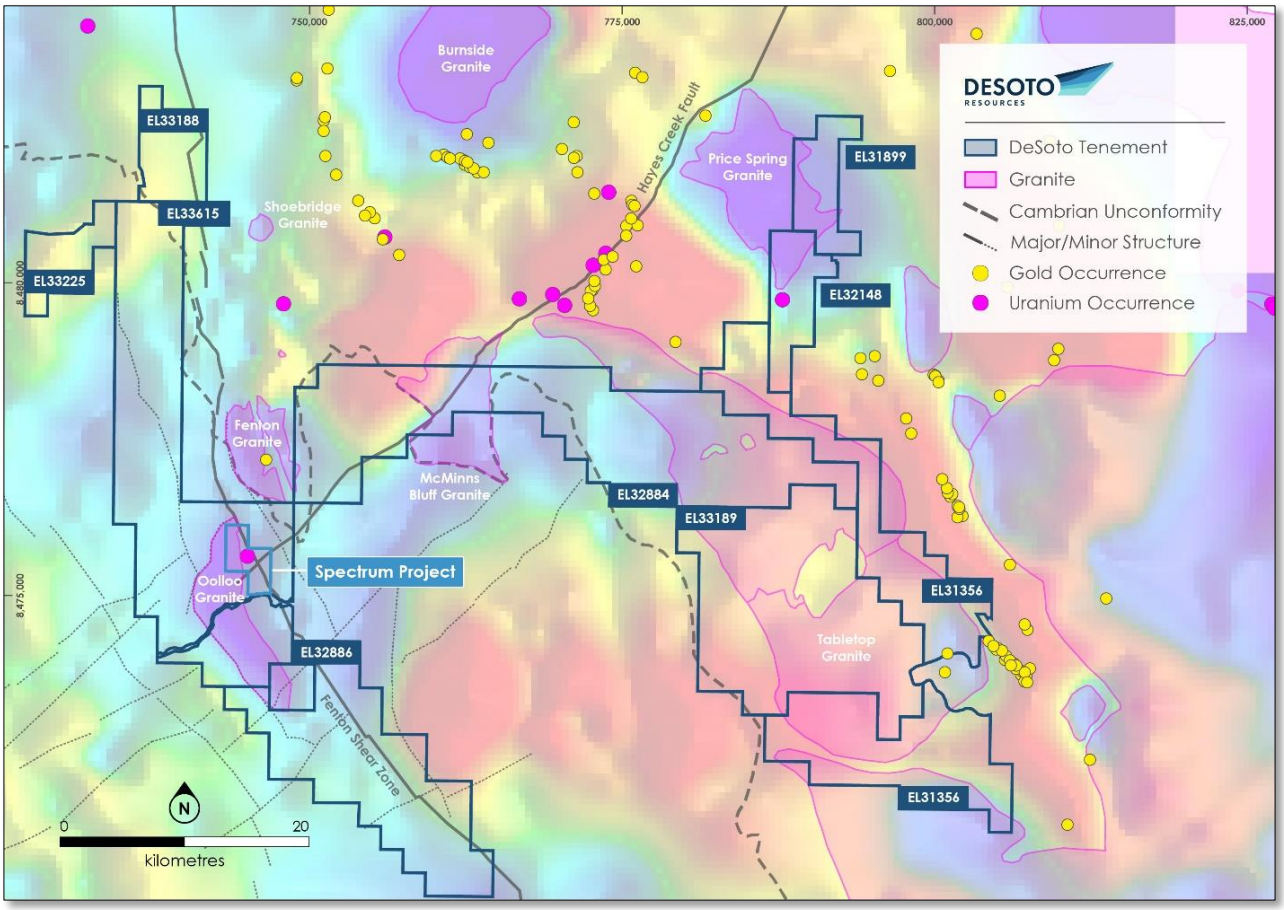

Figure 1 – NTGS and DeSoto merged and processed gravity data showing location of granites (light to dark blue features) within the Pine Creek area along with major structures and known gold and uranium occurrences.

Commenting on the results, Managing Director Chris Swallow:

"The discovery of a major granite body adjacent to the intersection two sets of regional scale structures adds to the prospectivity of the Spectrum target area along the Fenton Trend and the potential for making a multi-commodity discovery at Spectrum. This increased geological understanding provides further impetus to the forthcoming drilling program"

For further information visit our website at DeSotoresources.com or contact:

Chris Swallow
Managing Director
P: +61 412 174 882

[2] Source: Morelli, R.M., Bell, C.C, Creaser, R. A. and Simonetti, A. 2010. Constraints on the genesis of gold mineralisation at the Homestake Gold Deposit, Black Hill, South Dakota from rhenium-osmium sulphide geochronology. Mineralium Deposita v45, p461-480.

DeSoto Resources Limited (ASX:DES) ("DES" or the "Company") is pleased to announce results from a recent gravity data survey collected by the Northern Territory Geological Survey (NTGS).

This was a helicopter-assisted ground gravity survey conducted in late 2024 over the Pine Creek area and covering the DeSoto tenements. DeSoto collected infill gravity stations[3] and these data were merged to generate new gravity coverage.

TECHNICAL DISCUSSION

A Northern Territory Geological Survey (NTGS) helicopter-assisted ground gravity survey conducted in late 2024 over the Pine Creek inlier and undercover areas to the west has been released in the public domain[4]. This extensive and partially complete survey, stretching from Darwin to Pine Creek, covers virtually all DeSoto's tenements and represents a huge uplift in gravity data resolution.

The survey presented DeSoto with an opportunity to better evaluate the structural and intrusive architecture, both regionally and at the Spectrum Project. This has involved merging of the 2024 NTGS data with DeSoto's detailed gravity grids collected in 2024 along the Fenton trend (see Figure 1 for final merged and processed gravity data).

A critical new result is the presence of a 6mGal Bouguer gravity low anomaly alongside the Spectrum Project and beneath much of the Fenton region. This is interpreted as a newly defined granite, termed the Oolloo Granite. This is a coherent, oblong-shaped body, 3.5km wide by 15 km long. Inversion of the merged gravity indicates the low-density response persists to >5km depth. This is a separate body from the Fenton Granite to the northeast and is part of the Cullen Suite granitoids. The gravity response of the Oolloo Granite is directly comparable to outcropping granites of the Cullen Suite in the Pine Creek inlier, such as the Burnside and Prices Spring Granites (see Figure 1).

DeSoto's drilling campaign in 2023 at Fenton North (Figure 2) intersected granite at >500m depth in the base of holes FMD0001 and FMD0002, along with several dykes higher in the sequence. This confirms the gravity interpretation. The drilled granite is visibly deformed, suggesting a spatial relationship with the Fenton Shear Zone. Similarly, the outcropping Fenton Granite to the north-east (Figures 1 and 2) is also foliated in proximity to the Fenton Shear Zone.[5]

The new gravity data has led to a revised fault interpretation which reinforces the Spectrum area as a regional scale intersection of two mineralised trends, being the NNW-SSE trending Fenton Shear Zone and the NE-SW trending Hayes Creek Fault.

The shape of the Oolloo granite has a distinct dogleg outline, possibly due to the NE-SW trending Hayes Creek Fault interacting with the granite body (Figure 2). Note, a NE-SW alignment of the outcropping Cullen Suite intrusive bodies, the Burnside and Shoobridge granites, which reflects a deep-seated crustal scale control on intrusive and mineral deposit locations (Figure 1).

The Oolloo Granite intrudes Palaeoproterozoic iron-rich metasediments and tuffaceous rocks. These are deformed in an interpreted antiformal dome, defined from aeromagnetics and drilling (Figure 2). This domal structure mimics the shape of the buried granite as defined by gravity.

[3]DES ASX Announcement: Compelling Gravity Targets Generated At Spectum and Fenton South: 1st August 2024
[4]Source: https://resourcingtheterritory.nt.gov.au/news-and-events/news/2025/enhanced-gravity-coverage-boosts-exploration-potential-in-the-pine-creek-region
[5]AGSO Bulletin 229: Geology and Mineral Deposits of the Cullen Mineral Field, Northern Territory. 1997.

The Fenton Shear Zone is traced for >100km strike (Figure 1). In the Fenton area, its position was largely interpreted from aeromagnetics (prior to new gravity).

Drilling at Fenton North targeted the magnetic gradient between high and low magnetic intensity metasediments and tuffs and returned significant wide low grade gold values, both for Homestake and DeSoto[6].

It was considered that the Fenton Shear Zone is complex in nature and maybe best described as a distributed shear zone. Modelling of the depth to basement (and thickness of cover) from DeSoto 's 2023 SkyTEM survey[7], cross-referenced with historical drilling records, reveals a deepening (and thickening) of cover sediments westwards (Figure 3).

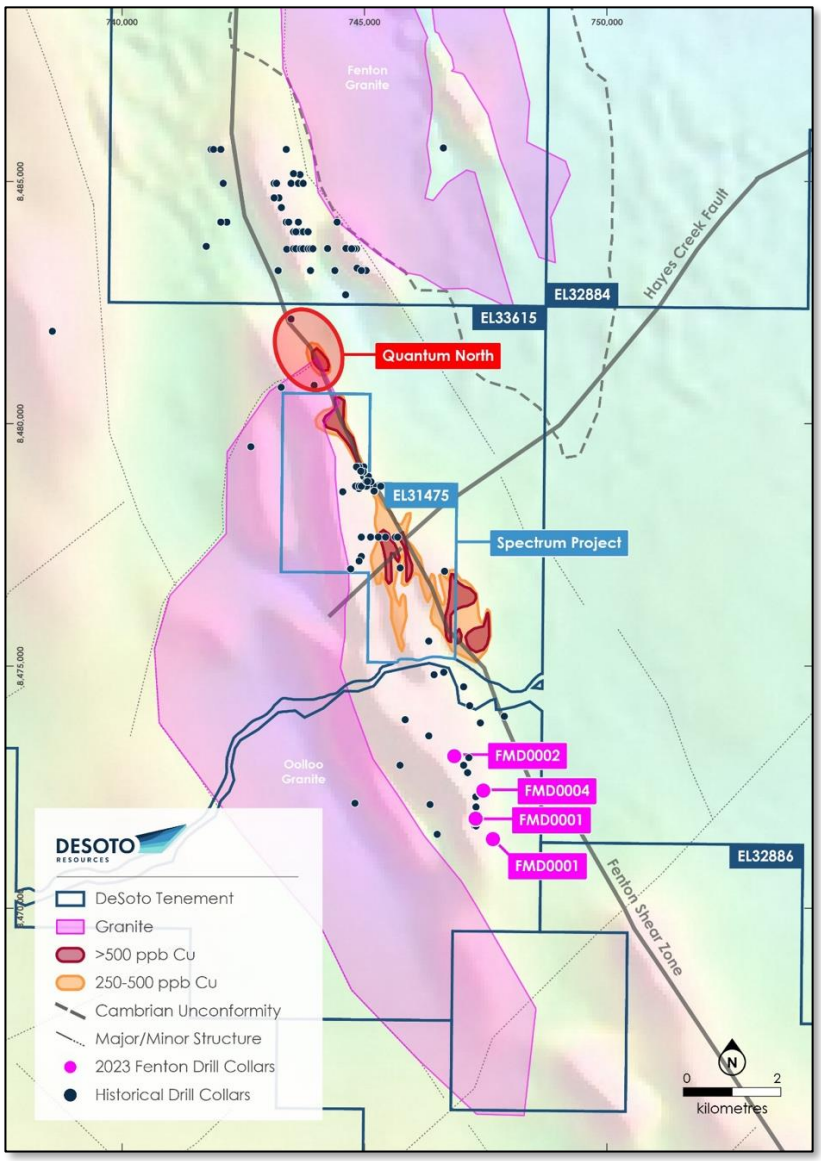

Figure 2 – The interpreted position of the Oolloo Granite and intersection of the Fenton Shear Zone and Hayes Creek Fault with the previously announced MMI Cu soil survey anomaly. The new Quantum North drill target is shown. The base image is the processed regional aeromagnetics.

[6]DES ASX Announcement: Drilling and Geophysics Confirm Scale of Fenton Gold Mineralised System: 29th January 2024
[7]DES ASX Announcement: Drilling and Geophysics Confirm Scale of Fenton Gold Mineralised System: 29th January 2024

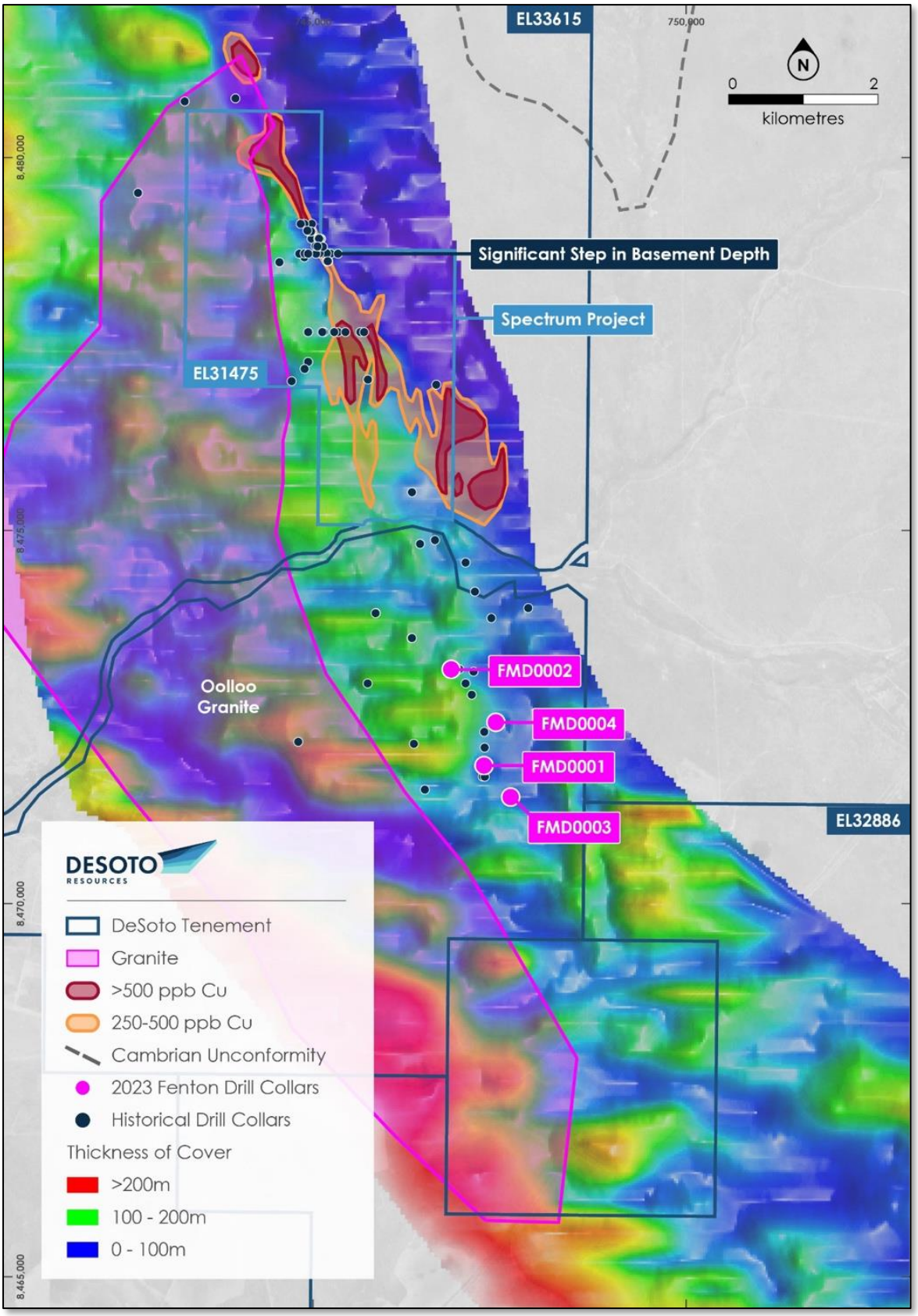

Figure 3 – Depth to basement modelling based on 2023 SkyTEM data showing the significant step in the basement and the interpreted position of the Fenton Shear Zone which is coincident with the MMI Cu soil anomaly at Spectrum.

Along with a regional thickening from east to west, the data reveals a distinct step in basement along a NNW-SSE trending lineament which effects a 40m offset of the basement/cover contact. This is interpreted as due to a basement fault that was reactivated, cuts through the unconformity and down dropped the Cambrian to the west, along what is now interpreted as the Fenton Shear Zone. The new gravity data aligns with this.

A gravity gradient is mapped (using automated edge detection techniques, "worms") which closely corresponds to the position of the stepped basement/cover contact in the 3D modelled cover thickness. The delineation of the Fenton Shear Zone has been re-interpreted (based on gravity and AEM) to lie 1km east of its previously interpreted position at the Fenton North prospect (Figure 2).

A soil survey by Homestake in the Fenton region in 1997 and 1998 identified a coherent linear Cu anomaly, up to 8km long, using a partial leach method (Figure 3). Re-sampling by DeSoto in 2024 largely confirms this[8]. Importantly, this anomaly is co-located with the offset in basement seen in the 2024 AEM data and in the newly merger gravity data. Together, the data suggests leakage of metal ions from a basement fault, into and through the Cambrian cover via a reactivated fault. This is further evidence of the metal prospectivity of the Spectrum Project.

The impact of a large granite body granite on the exploration potential of the Spectrum Project is likely to have added significant heat input (thermal metamorphism) which may have driven extensive fluid flow especially where it interacts with a deep crustal shear zone.

-END-

This release is authorised by the Board of Directors of DeSoto Resources Limited.

For further information visit our website at DeSotoresources.com or contact:

Chris Swallow
Managing Director
P: +61 412 174 882
E: cs@desotoresources.com

COMPETENT PERSONS STATEMENT

The information in this report that relates to exploration results is based on and fairly represents information and supporting documentation prepared by Mr Nick Payne.

Mr Payne is an employee of the company, is a member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Payne consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.

[8]DES ASX Announcement: Soil Results From Spectrum Confirm Significant Copper Soil Anomaly: 16th October 2024

TABLE 1 – JORC CODE – GEOPHYSICS RESULTS

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Technique	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	NTGS GROUND GRAVITY SURVEY The NTGS Pine Creek Ground Gravity Survey is a partially helicopter assisted program that covers an area of over 40 000 square km stretching from the northwest coastline across to Kakadu National Park in the east and extending as far south as Katherine. The survey was funded through the Northern Territory Government's *Resourcing the Territory* program with industry contributions funding acquisition of over one third of the total readings acquired. Contract management for the survey is being undertaken by Geoscience Australia in collaboration with NTGS. Initial release of data covers most of the Pine Creek region at an average station spacing of 4km. DESOTO GROUND GRAVITY SURVEY Infill of areas of interest to DeSoto were collected at 250x125km station spacing. The survey was by Atlas Geophysics Pty Ltd, an independent geophysical contractor. The survey used the following equipment: One CG05 Autograv Gravity Meter One CHCi70+GNSs Rover Receiver One ESVE300PRO GNSS Receive
Drilling	Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	This release has no reference to previously unreported drill results.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	This release has no reference to previously unreported drill results.

Logging	Whether core and chip samples have been geologically and geotechnical logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc) photography. The total length and percentage of the relevant intersections logged.	This release has no reference to previously unreported drill results.
Sub-Sampling Technique and Sample Preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	This release has no reference to previously unreported drill results.
Quality of Assay Data and Laboratory Tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	A total of 10,130 gravity stations were collected by the NTGS Survey. A total of 881 gravity stations on a 250m x 125m grid were acquired as part of DeSotoo's infill grids. A total of 3% of gravity stations were repeated. Data QAQC was completed by the acquisition contractor and verified by an independent consultant geophysicist using industry standard software
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data	Data QAQC was completed by the acquisition contractor and verified by an independent consultant geophysicist. This release has no reference to previously unreported drill results, sampling, assays or mineralisation.
Location of Data points	Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used Quality and adequacy of topographic control	Positional data was recorded in projection MGA1994 Zone 52S.
Data Spacing and Distribution	Data spacing for reporting of Exploration Results	The NTGS survey station spacing is at an average of 2x2km.

	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied	The DES survey was on a 250m x 125m grid. This data spacing is sufficient to establish geological continuity over the surveyed areas
Orientation of Data in Relation to Geological Structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	NTGS survey was collected on a 2x2km grid, covering the whole range of geological structures. Desoto's infill surveys collected on a 250x125m grid along E-W oriented lines which is approximately perpendicular to strike of units in the Proterozoic basement.
Sample Security	The measures taken to ensure sample security	This release has no reference to previously unreported drill results, sampling, assays or mineralisation.
Section 2 Reporting of Exploration Results		
Mineral Tenement and Land Tenure Status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Pine Creek Project comprises nine contiguous exploration licences (EL31356, EL32148, EL31899, EL32884, 32886, EL33188-33189, EL33225 and EL33615 (amalgamation of EL32885 and EL33450) covering an area of 1,565 km^2. The licences are held by Mangusta Minerals Pty Ltd, a 100% owned Desoto subsidiary. The Spectrum Project is held by CopperOz Pty Ltd and sits within exploration license EL31475 which is wholly enclosed within DeSoto exploration license EL33615. The Project is located approximately 150 km south of Darwin, and 8 km north of Pine Creek in the Northern Territory. Access to the Pine Creek Project is from the sealed Stuart Highway Hayes Creek via the sealed Dorat Road and Oolloo Roads and then via well maintained gravel roads.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	The majority of past exploration work within the Project area (including drilling, surface sampling; geophysical surveys, geological mapping) has been largely completed by Homestake Gold of Australia, North Mining, Newmont Australia, St George Mining Pty Ltd, Aztec Mining Ltd, AngloGold Australia, Davos Resources and Thundelarra Exploration The relevant reports are available on the Northern Territory Geological Survey GEMIS open file database library. A summary of previous work completed can be found in the company prospectus at www.desotoresources.com
Geology	Deposit type, geological setting and style of mineralisation.	The Fenton Project is located in the western and central sections of the Central Domain of the Pine Creek Orogen and comprises units of the Cosmo Supergroup which include the South Alligator Group, and Finniss River Group. The stratigraphic sequences are dominated by mudstones, siltstones, greywackes, sandstones, tuffs, and limestones. These sedimentary units, as well as basic intrusions, were folded, metamorphosed, and then subsequently intruded by the Cullen Batholith. Pegmatites occur throughout the region in close proximity to the Cullen Granites. The project area is overlain by younger Cambrian basin sedimentary sequences. The Fenton Project is considered prospective for orogenic Pine Creek gold mineralisation and pegmatite hosted lithium (spodumene) mineralisation. The majority of known gold deposits are hosted by the South Alligator Group and the lower parts of the Finniss River Group along anticlines, strike-slip shear zones and thrusts proximal to the Cullen Granite. The REE mineralisation reported here is hosted within sheared dolerite and Banded Iron Formation units with quartz-pyrite-pyrrhotite veining. The origin of the REE mineralisation is not yet understood but is assumed to be related to the intrusion of granites near the Fenton Shear Zone.
Drill Hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the	Information is presented in plans in the release.

	following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No data aggregation methods have been used in results reported in this release.
Relationship Between Mineralisation Widths and Intercept Lengths	These relationships are particularly important in the reporting of Exploration Results If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	No drilling or mineralisation results are reported in this release that have not been previously released and referenced.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	See Figures 1-3.
Balanced Reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	The company believes this announcement is a balanced report, and that all material information has been reported.
Other Substantive Exploration Data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Exploration drilling for gold by previous explorers has been conducted by Homestake Gold of Australia (FEND14 and FEND 18 holes in particular), Newmont Australia (KAD0001-3) in the current area. The Company is also aware of regional scale aeromagnetic and AEM surveys, and geological mapping programmes undertaken by past explorers and has access to versions of the data that is available in reports.
Further Work	The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling. Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Planned further work includes up to 10,000m of RC and Diamond drilling over the Spectrum, Vesper and Fenton South projects.